

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN

SSI TECHNOLOGIES, LLC,

Plaintiff,

vs.

Case No. 20-cv-00019-jdp

JURY TRIAL DEMANDED

DONGGUAN ZHENGYANG ELECTRONIC
MECHANICAL LTD.,

Defendant.

SECOND AMENDED COMPLAINT

Plaintiff SSI Technologies, LLC (“SSI”), by its counsel, Michael Best & Friedrich LLP, alleges as follows for its Second Amended Complaint against Defendant Dongguan Zhengyang Electronic Mechanical LTD (“DZEM” or “Defendant”).

NATURE OF THE ACTION

1. This is an action for patent infringement under the patent laws of the United States, 35 U.S.C. § 100 *et seq.*, including 35 U.S.C. § 271, arising from DZEM’s actions, including making, using, selling, offering for sale and/or importing into the United States one or more products that infringe U.S. Patent Nos. 9,535,038 (“the ’038 Patent”) and 8,733,153 (“the ’153 Patent”) (collectively, “the SSI Patents”), including the DZEM DEF quality sensor (“Accused Products”).

THE PARTIES

2. SSI is a limited liability company organized under the laws of the State of Wisconsin and has its principal place of business at 3200 Palmer Drive, Janesville, Wisconsin 53546.

3. Upon information and belief, DZEM is a foreign entity organized under the laws of the People's Republic of China. DZEM's registered address and principal place of business at

No. 1 Donghuan Third Street, Jitigang Village, Huangjiang Town, Dongguan City, Guangdong Province, People's Republic of China.

JURISDICTION AND VENUE

4. SSI's claim arises under the patent laws of the United States, Title 35 of the United States Code.

5. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

6. This Court has personal jurisdiction over DZEM because, upon information and belief, DZEM directly and/or through intermediaries, imported into the United States and sold and/or offered the Accused Products that infringe the SSI Patents, as well as other products.

7. DZEM is not a resident of the United States.

8. DZEM is not subject to jurisdiction in any state's courts of general jurisdiction.

9. Exercise of jurisdiction over the DZEM is consistent with the United States Constitution and laws because it would comport with due process and would be reasonable and fair.

10. DZEM does business in the United States including importing, offering to sell and/or selling the Accused Products and other products in the United States.

11. DZEM attends trade shows in the United States, including attending the Integer Emissions Summit USA on November 19-20, 2019 in Indianapolis, Indiana (the "Integer Emissions Summit").

12. DZEM displayed and discussed the Accused Products and other products at the Integer Emissions Summit.

13. DZEM operates an internationally-accessible website www.kusauto.com that is presented in English. DZEM's website includes at least the following web-page for the Accused Products:

DEF quality sensor

- Widely used in the world famous trucks and bus
- High precision, high and low level indication
- Reed switch, Continuous and steady output signal
 - ◆ DEF/AdBlue Level detecting
 - ◆ DEF/AdBlue concentration detecting
 - ◆ DEF/AdBlue suction and return
 - ◆ Engine coolants recirculation for heating urea
 - ◆ Temperature measurement
 - ◆ Impurity filtration
- J1939 (CAN-bus) is used to have better contact with the main control system,
- Built in high-performance software, can output real-time and stable Urea concentration
- Built in OBD, can provide real-time monitoring for the operation of Urea sensor
- Bayonet twist lock for easy assembly
- Selectable length subject to users' application
- Options of different electronic connectors and fitting type
- Comply with EURO IV, V, VI, Bharat Stage, EPA 2010, China IV, V
- Especially suitable for extremely cold area



14. On information and belief, DZEM has discussed and offered for sale the Accused Products to customers or potential customers in the United States.

15. Venue is proper in this judicial district pursuant to at least 28 U.S.C. §§1391(b)(2), (c)(3) and 1400 because injuries from DZEM's actions have been and will continue to be felt in this District and DZEM is subject to personal jurisdiction in this District.

SSI'S PRODUCTS AND THE SSI PATENTS

16. SSI is an innovative company that is a leader in the custom development of sensor solutions for a wide range of markets. SSI designs and manufactures pressure, level and magnetic sensors, sensor-based monitoring systems, digital pressure gauges, and digital level gauges for automotive and industrial applications.

17. SSI invested substantially to develop its diesel exhaust fluid (“DEF”) sensor technology. SSI’s DEF sensor technology includes mechanisms and methods for reducing the effects of aeration on ultrasonic level or concentration measurement systems. For example, SSI designed and manufactures the TULC Sensor, which is an in-tank combination sensor for accurate, reliable measurement of temperature, level, and fluid quality/concentration, for selective catalytic reduction (“SCR”) DEF tanks that meet legislated mandates for cleaner diesel emissions. SSI’s DEF sensor products have made it a market leader for DEF sensor technology.

18. SSI has protected its technologies through a broad range of intellectual property rights, including patents related to level and magnetic sensors, digital pressure gauges and level gauges for automotive and industrial applications.

19. The ’038 Patent, entitled “Reduction of Aeration Interference in an Ultrasonic Fluid Sensing System,” was duly and legally issued by the United States Patent and Trademark Office on January 3, 2017. A true and complete copy of the ’038 Patent is attached to the Second Amended Complaint as Exhibit A. The ’038 Patent is valid and enforceable.

20. SSI is the sole owner of the ’038 Patent. As the owner of the ’038 Patent, SSI is authorized and has standing to bring legal action to enforce all rights arising from the ’038 Patent.

21. The '038 Patent is directed to mechanisms and techniques for reducing interference in measurements caused by gas bubbles (e.g., a gas trapped in a liquid) in fluid level and concentration sensors. Fluid level and fluid concentration sensing is important in a number of vehicle applications including, for example, the sensing of DEF used in an SCR diesel emission-control system.

22. The '153 Patent, entitled "Systems and Methods of Determining a Quality and/or Depth of Diesel Exhaust Fluid," was duly and legally issued by the United States Patent and Trademark Office on May 27, 2014. A true and complete copy of the '153 Patent is attached to the Second Amended Complaint as Exhibit B. The '153 Patent is valid and enforceable.

23. SSI is the sole owner of the '153 Patent. As the owner of the '153 Patent, SSI is authorized and has standing to bring legal action to enforce all rights arising from the '153 Patent.

24. The '153 Patent is directed to systems and methods for determining a contaminant exists in a fluid based on the use of ultrasonic sensing and temperature while the measured volume of the fluid is decreasing. Determining whether a contaminant in a fluid is important in a number of vehicle applications including, for example, providing information to a driver that an incorrect fluid is present in a tank meant to contain DEF that is used in an SCR diesel emission-control system.

DZEM'S ACCUSED DEF SENSORS

25. On information and belief, DZEM has made, used, offered to sell, sold and/or imported into the United States, the Accused Products.

26. The following is picture of an accused DZEM DEF quality sensor.



27. The Accused Products directly compete with SSI's DEF sensor products, including the TULC Sensor.

28. The Accused Products include each and every limitation of at least claim 9 of the '038 Patent, which recites:

9. A sensor operable to sense a characteristic of a fluid, the sensor comprising:

a sensing area configured to contain the fluid;

a chimney configured to exhaust entrapped air from the sensing area; and

a filter covering the sensing area, the filter configured to allow a liquid portion of the fluid to enter the sensing area, and

substantially prohibit one or more gas bubbles of the fluid from entering the sensing area; and

a transducer configured to

output a pulse of sound through the liquid portion of the fluid contained within the sensing area,

receive the reflected pulse of sound, and

output a characteristic of the fluid based on the received pulse of sound.

29. DZEM directly infringes at least claim 9 of the '038 Patent by making, using, offering to sell, selling and/or importing into the United States the Accused Products.

30. DZEM induces infringement of at least claim 9 of the '038 Patent by actively encouraging distributors, customers, and others to sell, offer for sale, use and/or import the Accused Products.

31. DZEM does not have authority to make, use, offer to sell, sell the Accused Products within the United States, or to import into the United States, any invention claimed in the '038 Patent.

32. Claim 1 of the '153 Patent states:

1. A system for determining a quality of a fluid in a tank, the system comprising:

a transducer configured to generate a sound wave and to detect an echo of the sound wave, the transducer positioned near the bottom of the tank such that the sound wave travels toward a fixed object, the fixed object positioned a known distance away from the transducer;

a temperature sensor configured to detect a temperature of the fluid; and

a controller configured to

produce a signal to drive the transducer to produce the sound wave,

receive an indication of the detected echo from the transducer,

receive an indication of the temperature of the fluid from the temperature sensor, and

determine whether a contaminant exists in the fluid based on the temperature of the fluid, a time period from when the sound wave is produced to when the echo is detected, and at least one of the group of a) whether a measured volume is out of range and b) a dilution of the fluid is detected while the measured volume of the fluid decreases.

33. The Accused Products, *i.e.*, the DZEM DEF quality sensor determine the quality of a fluid in a tank.

34. The Accused Products have a transducer configured to generate a sound wave and to detect an echo of the sound wave.

35. The Accused Products have a transducer positioned near the bottom of the tank.

36. The Accused Products have a temperature sensor configured to detect a temperature of a fluid.

37. The Accused Products have a controller configured to produce a signal to drive the transducer to produce the sound wave, receive an indication of the detected echo from the transducer, and receive an indication of the temperature of the fluid from the temperature sensor.

38. The Accused Products determine whether a contaminant exists in the fluid based on the temperature of the fluid.

39. The Accused Products determine whether a contaminant exists in fluid based on a time period from when the sound wave is produced to when the echo is detected.

40. In the Accused Products, a dilution of the fluid is detected while the measured volume of the fluid decreases.

41. DZEM directly infringes at least claim 1 of the '153 Patent by making, using, offering to sell, selling and/or importing into the United States the Accused Products.

42. DZEM induces infringement of at least claim 1 of the '153 Patent by actively encouraging distributors, customers, and others to sell, offer for sale, use and/or import the Accused Products.

43. DZEM does not have authority to make, use, offer to sell, sell the Accused Products within the United States, or to import into the United States, any invention claimed in the '153 Patent.

44. SSI notified DZEM of its infringement of the '038 patent on October 8, 2019.

45. DZEM was aware of the '038 patent before SSI notified DZEM of infringement on October 8, 2019.

46. DZEM was aware of the '153 patent at least by October 8, 2019.

47. DZEM is aware that its manufacture, use, offer for sale, sale, and/or importing the Accused Products, and inducement of others to use, sell, offer for sale, sell and/or import the Accused Products, infringe the '038 patent at least through the notice of infringement provided by SSI to DZEM on October 8, 2019.

COUNT I
Infringement of U.S. Patent No. 9,535,038

48. SSI re-alleges and incorporates the foregoing paragraphs as though fully set forth herein.

49. SSI has the right to enforce the '038 patent and the right to recover damages for infringement.

50. DZEM has infringed the '038 patent, literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing the Accused Products.

51. DZEM has infringed the '038 patent by inducing others to make, use, offer to sell, sell and/or import the Accused Products.

52. DZEM knew that making, using, offering to sell, selling, and/or importing the Accused Products would infringe the '038 patent. DZEM's past and continued infringement of the '038 patent has been and continues to be willful and deliberate.

53. Because of DZEM's infringement of the '038 Patent, SSI has suffered and will continue to suffer irreparable harm and monetary damages, which continue to accrue, in an amount to be determined at trial.

54. DZEM's willful infringement will continue unless enjoined by this Court.

55. DZEM's conduct makes this an exceptional case; SSI should therefore be awarded enhanced damages and its reasonable attorney's fees pursuant to 35. U.S.C. §§ 284 and 285 and other applicable rules, statutes, and law.

COUNT II
Infringement of U.S. Patent No. 8,733,153

56. SSI re-alleges and incorporates the foregoing paragraphs as though fully set forth herein.

57. SSI has the right to enforce the '153 patent and the right to recover damages for infringement.

58. DZEM has infringed the '153 patent, literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing the Accused Products.

59. DZEM has infringed the '153 patent by inducing others to make, use, offer to sell, sell and/or import the Accused Products.

60. DZEM knew that making, using, offering to sell, selling, and/or importing the Accused Products would infringe the '153 patent. DZEM's past and continued infringement of the '038 patent has been and continues to be willful and deliberate.

61. Because of DZEM's infringement of the '153 Patent, SSI has suffered and will continue to suffer irreparable harm and monetary damages, which continue to accrue, in an amount to be determined at trial.

62. DZEM's willful infringement will continue unless enjoined by this Court.

63. DZEM's conduct makes this an exceptional case; SSI should therefore be awarded enhanced damages and its reasonable attorney's fees pursuant to 35 U.S.C. §§ 284 and 285 and other applicable rules, statutes, and law.

PRAYER FOR RELIEF

WHEREFORE, SSI respectfully prays that upon trial on the merits this Court render judgment in SSI's favor and against DZEM as follows:

- A. Judgment that DZEM has infringed the SSI Patents under 35 U.S.C. § 271;
- B. A preliminary and permanent injunction pursuant to 35 U.S.C. § 283, preventing DZEM, its officers, agents, servants, employees, successors, assignees, parents, subsidiaries, affiliated or related companies, attorneys, and all others in active concert or participation with any of them from further infringing the SSI Patents;
- C. An award of damages adequate to compensate SSI for DZEM's patent infringement, and no less than the damages provided for under 35 U.S.C. §284;
- D. An award for enhanced damages under 35 U.S.C. §284;
- E. An award of attorneys' fees under 35 U.S.C. §285;
- F. An award of pre-judgment interest, post-judgment interest, and all costs associated with this action; and
- G. Any other relief as the Court deems appropriate and just under the circumstances.

JURY DEMAND

SSI demands a trial by jury on all matters and issues properly tried to a jury pursuant to Federal Rules of Civil Procedure 38 and 39, and other applicable federal and state law.

Dated this 20th day of October, 2020.

Respectfully submitted,

MICHAEL BEST AND FRIEDRICH LLP

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